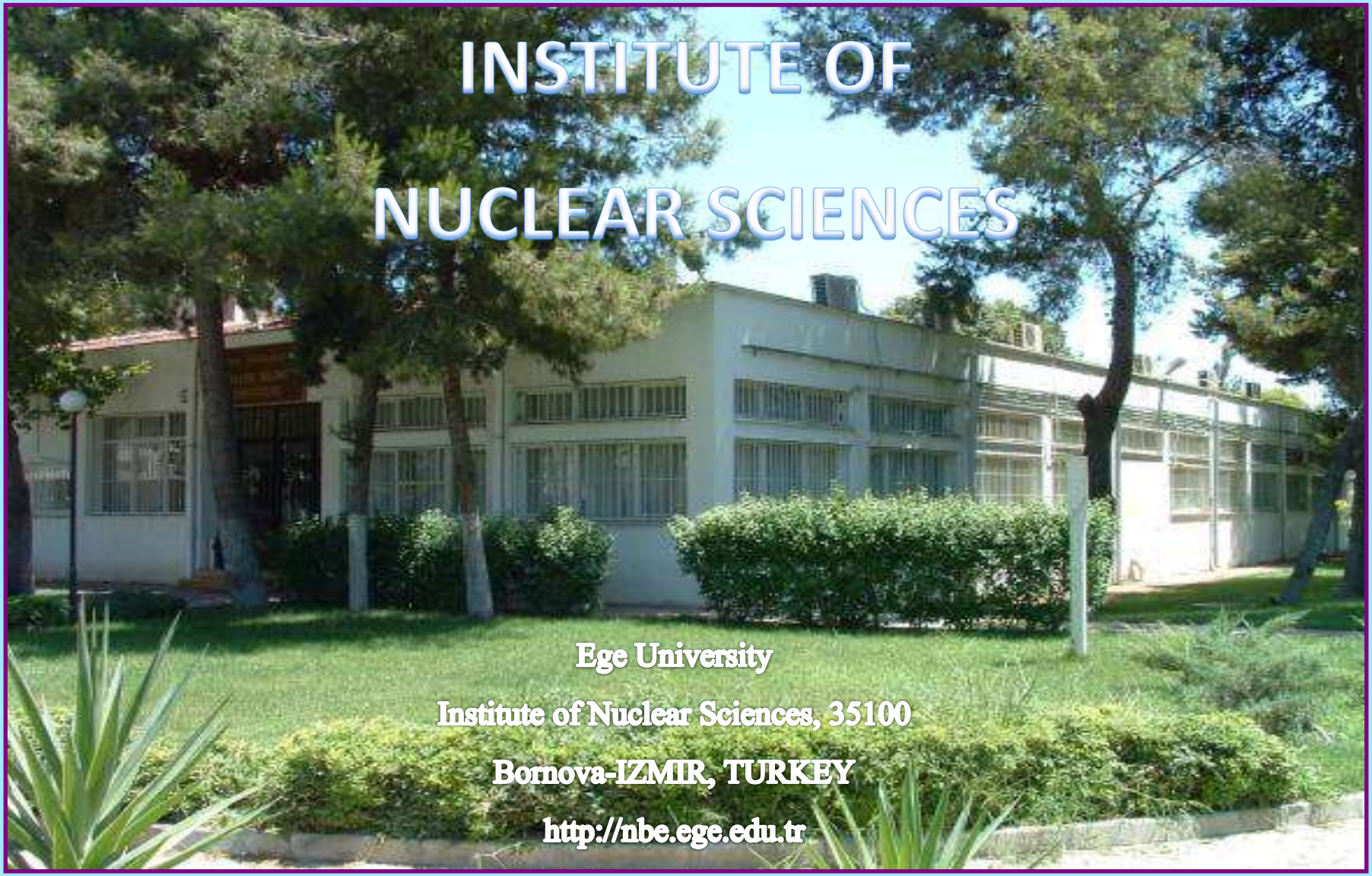
# ITRAC-3 Nuclear Science Training Course with NUCLEONICA

Emine NOSTAR

# İZMİR



# INSTITUTE OF NUCLEAR SCIENCES

**Ege University**

**Institute of Nuclear Sciences, 35100**

**Bornova-IZMIR, TURKEY**

**http://nbe.ege.edu.tr**

# EDUCATION AND RESEARCH FIELDS

- Nuclear Physics
- Nuclear Chemistry
- Radiopharmacy and Radiopharmaceutical Chemistry
- Medical Physics
- Nuclear Fuel Technology
- Health Physics
- Nuclear Spectroscopy
- Nuclear Electronic

# EGE UNIVERSITY INSTITUTE OF NUCLEAR SCIENCES

**DIRECTOR**

**D E P A R T M E N T S**

**NUCLEAR SCIENCES**

- Spectroscopy Laboratory
- Radioactivity Counting Laboratory
- Radon Measurement Laboratory
- Electrodeposition Laboratory

**NUCLEAR TECHNOLOGY**

**Applied and Theoretical Nuclear Physics**

**Environmental Studies and Monitoring**

**NUCLEAR APPLICATIONS**

# DEPARTMENT OF NUCLEAR SCIENCES RESEARCH INTEREST

- Applications of different nuclear techniques in several fields (prediction of earthquake, determination of sedimentation rate in sea and lake sediments, erosion, trace elements analyses etc.)
- Measurement of indoor and outdoor radon concentration
- Investigating radiation-matter interactions by Monte Carlo simulation
- Development of nuclear spectroscopic techniques and the counting systems
- Investigation of thermal fission systems by Monte Carlo technique
- Determination of natural and artificial radionuclides in environmental samples using different techniques
- Applications of luminescence techniques in material science, dating and radiation dosimetry
- Ultraviolet dosimeter (UV) and opticaly stimulating luminescence (OSL)

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**DIRECTOR**

**D E P A R T M E N T S**

**NUCLEAR SCIENCES**

- Nuclear Chemistry and Radioanalytical Chemistry
- Environmental Studies
- Nuclear Fuel Chemistry

**NUCLEAR TECHNOLOGY**

- Radioanalytical Chemistry Laboratory
- Nuclear Fuel Chemistry Laboratory
- Instrumental Analysis Laboratory
- ICP-OES Laboratory

**NUCLEAR APPLICATIONS**

# DEPARTMENT OF NUCLEAR TECHNOLOGY RESEARCH INTEREST

- Recovery, concentration and purification of uranium and thorium from ore or different sources
- Preparation and characterization studies of various uranium and thorium compounds
- Determination of some natural radionuclides in environmental samples by using various methods
- Uranium and thorium determination in all concentration ranges
- Recovery of some radionuclides using natural and synthetic adsorbents and synthesizing new selective adsorbents, and investigation of their potential in radioactive waste management
- Preparation and characterization of nuclear fuel compounds
- Studies on determination and recovery of rare earth elements by chromatographic methods

# EGE UNIVERSITY INSTITUTE OF NUCLEAR SCIENCES

**DIRECTOR**

**D E P A R T M E N T S**

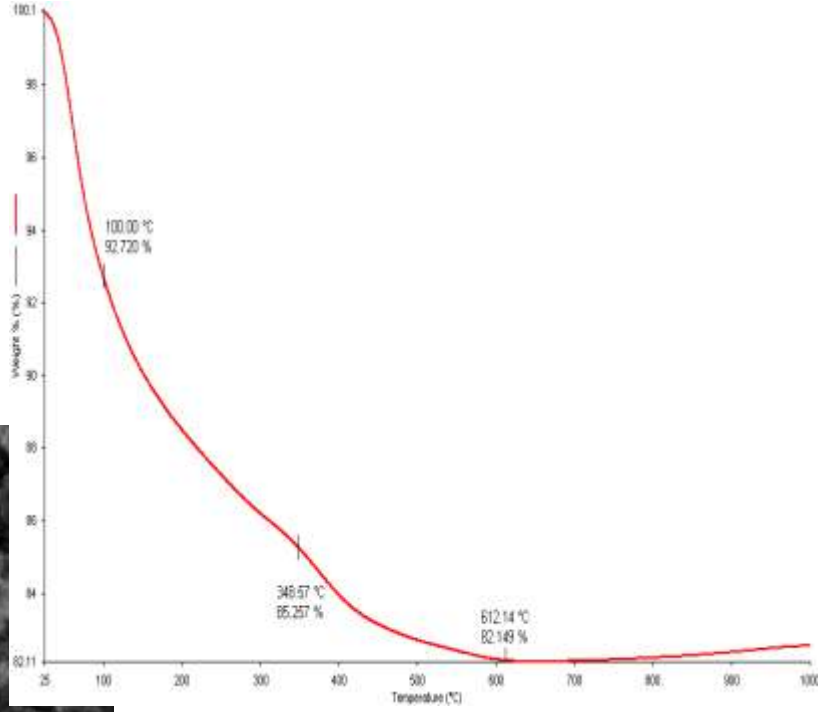
- **NUCLEAR SCIENCES**
- **NUCLEAR TECHNOLOGY**
- **NUCLEAR APPLICATIONS**

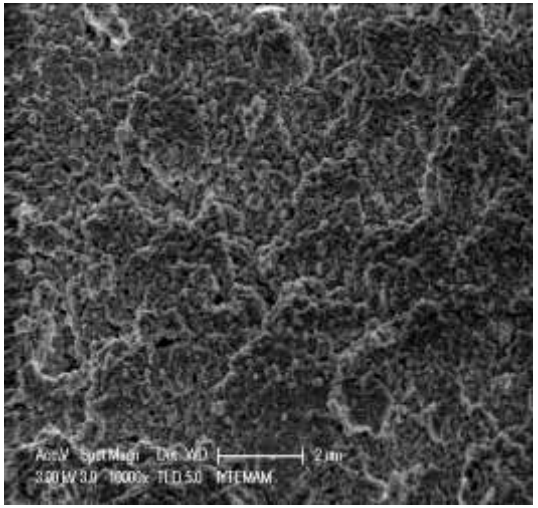
- **Radiochemistry**
  - Radiochromatography Laboratory
- **Radiopharmacy**
  - Nuclear Chemistry Laboratory
- **Nuclear Electronics**
  - Nuclear Electronic Laboratory

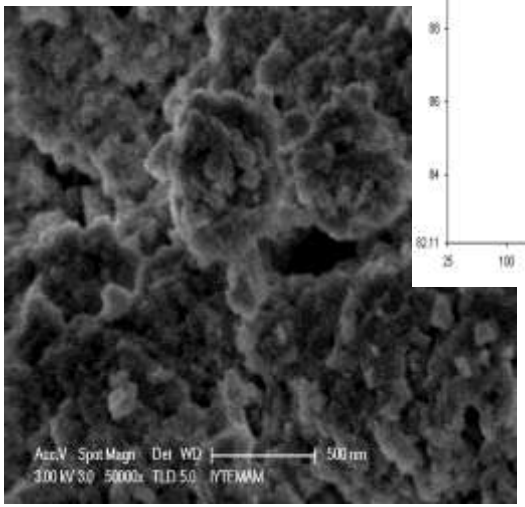
# DEPARTMENT OF NUCLEAR APPLICATIONS RESEARCH INTEREST

- Design, sythesis and radiolabelling of new molecules and radiopharmaceuticals
- Radioiodine, technetium, rhenium, florine chemistry
- Quality controls of radiopharmaceuticals
- In vivo investigation of radiopharmaceutical potentials by biodistribution studies on animal models
- Dosimeter and microdosimeter studies for radionuclides used in nuclear medicine
- Stability constants of actinite complexes
- Design and troubleshooting nuclear spectroscopy systems
- Design and development of radiation detection and dose measurement systems
- Medical imaging

# INVESTIGATION OF HYDRATED CERIUM DIOXIDE UTILIZATION FOR THE REMOVAL OF BARIUM AND STRONTIUM FROM LIQUID NUCLEAR WASTE




Thank You
Mahalo
Kiitos
Tack
TEŞEKKÜRLER
Toda
Thanks
Grazie
Obrigado
Takk
Merci
Gracias